Fig. 1

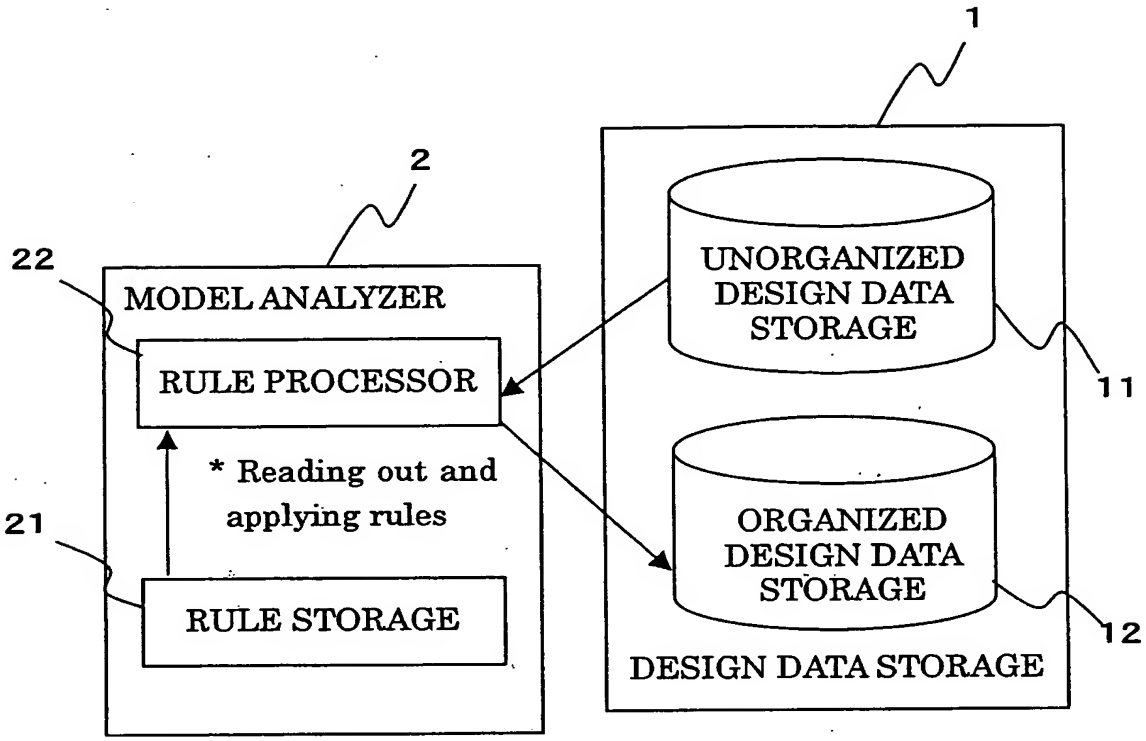

1
2
22
MODEL ANALYZER
RULE PROCESSOR
* Reading out and applying rules
21
RULE STORAGE
UNORGANIZED DESIGN DATA STORAGE
11
ORGANIZED DESIGN DATA STORAGE
12
DESIGN DATA STORAGE

Fig. 2

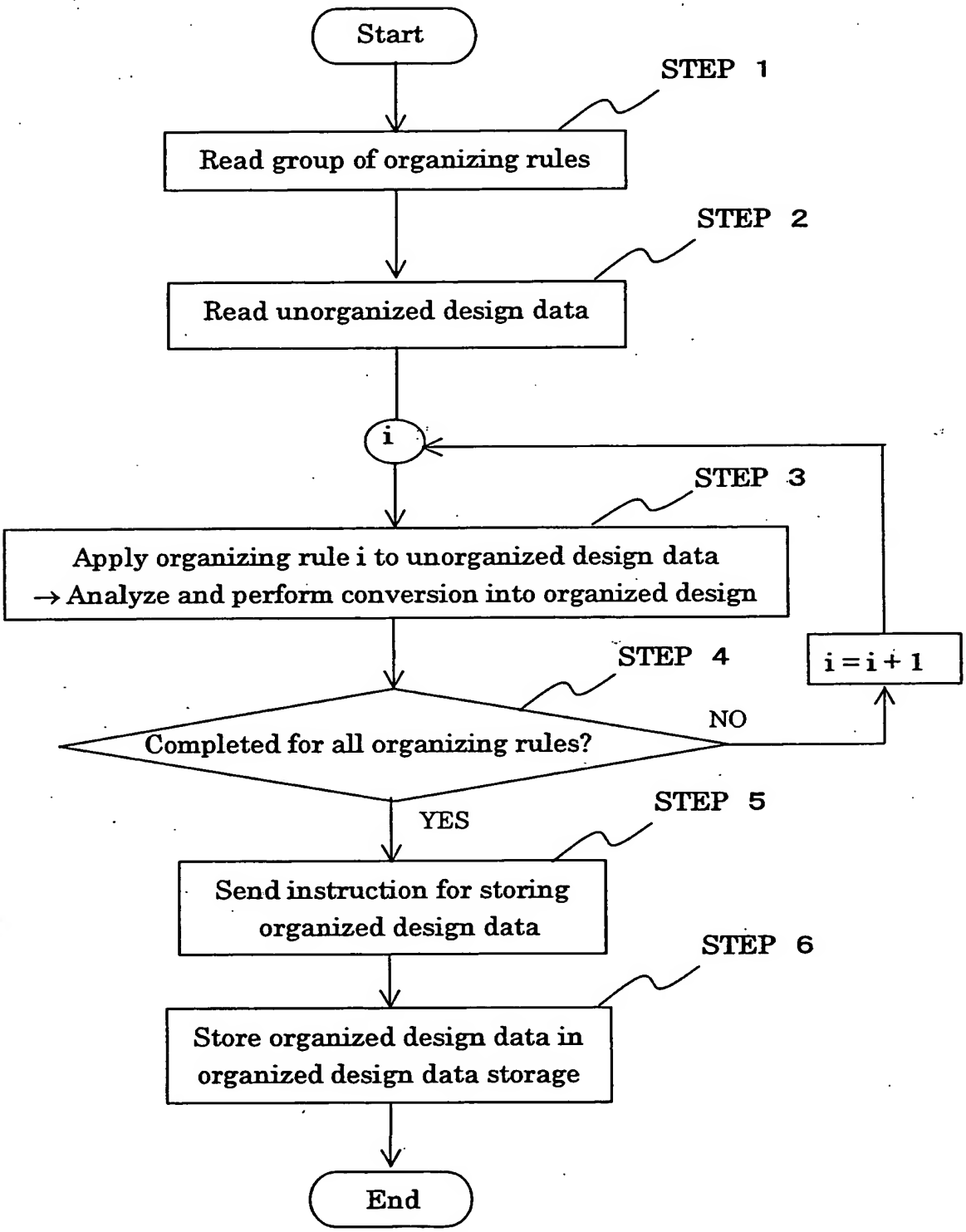

Start
STEP 1
Read group of organizing rules
STEP 2
Read unorganized design data
i
STEP 3
Apply organizing rule i to unorganized design data
→ Analyze and perform conversion into organized design
STEP 4
Completed for all organizing rules?
NO
i = i + 1
YES
STEP 5
Send instruction for storing organized design data
STEP 6
Store organized design data in organized design data storage
End

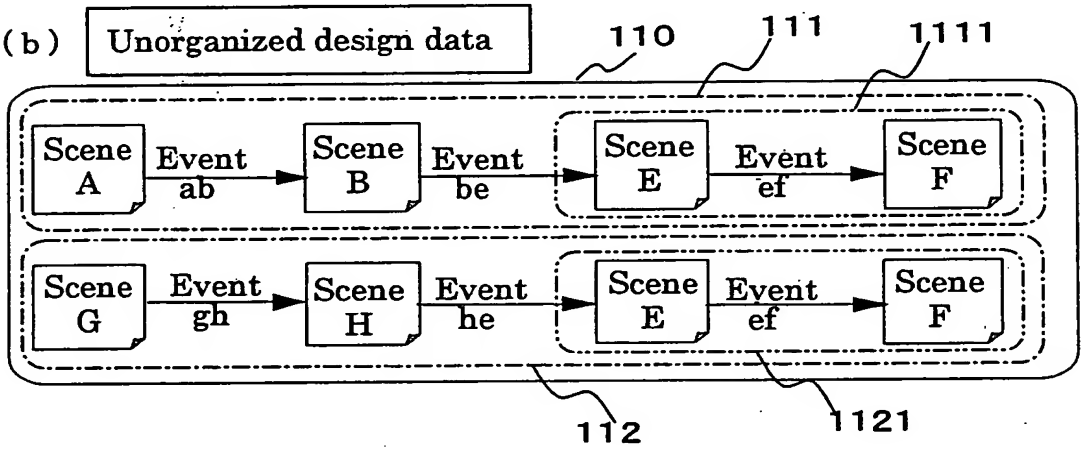
Fig. 3

(a) Organizing rule

211

Name	Condition	Condition values	Applied processing
Layering of duplicate definitions	Scene sequence segment including n or more elements appears m or more times	n=2 m=2	Cut out target scene sequence segment as one state and perform layering

(b) Unorganized design data



(c) Organized design data

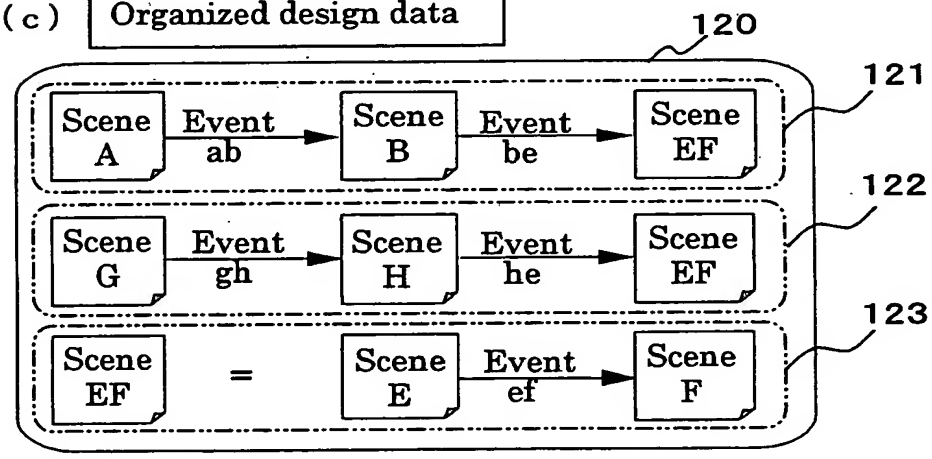


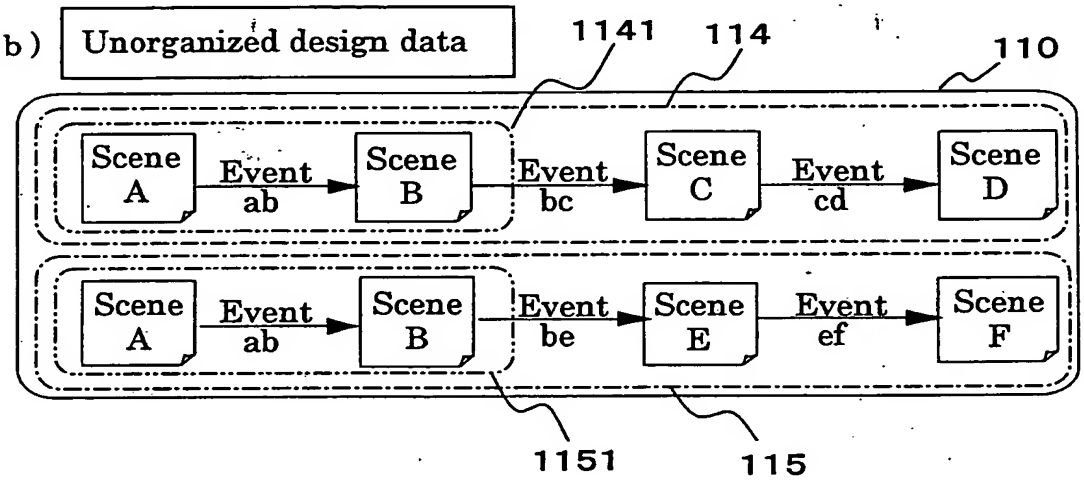
Fig. 4

(a) Organizing rule

212

Name	Condition	Condition values	Applied processing
Unification by branch	Scene sequence segments having n or more elements from initial state are identical	n=2	Unify target scene sequence segments

(b) Unorganized design data



(c) Organized design data

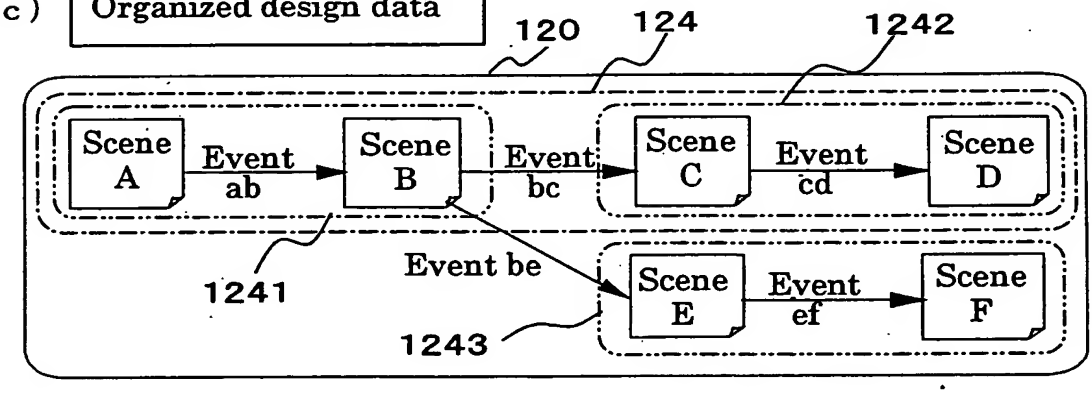


Fig. 5

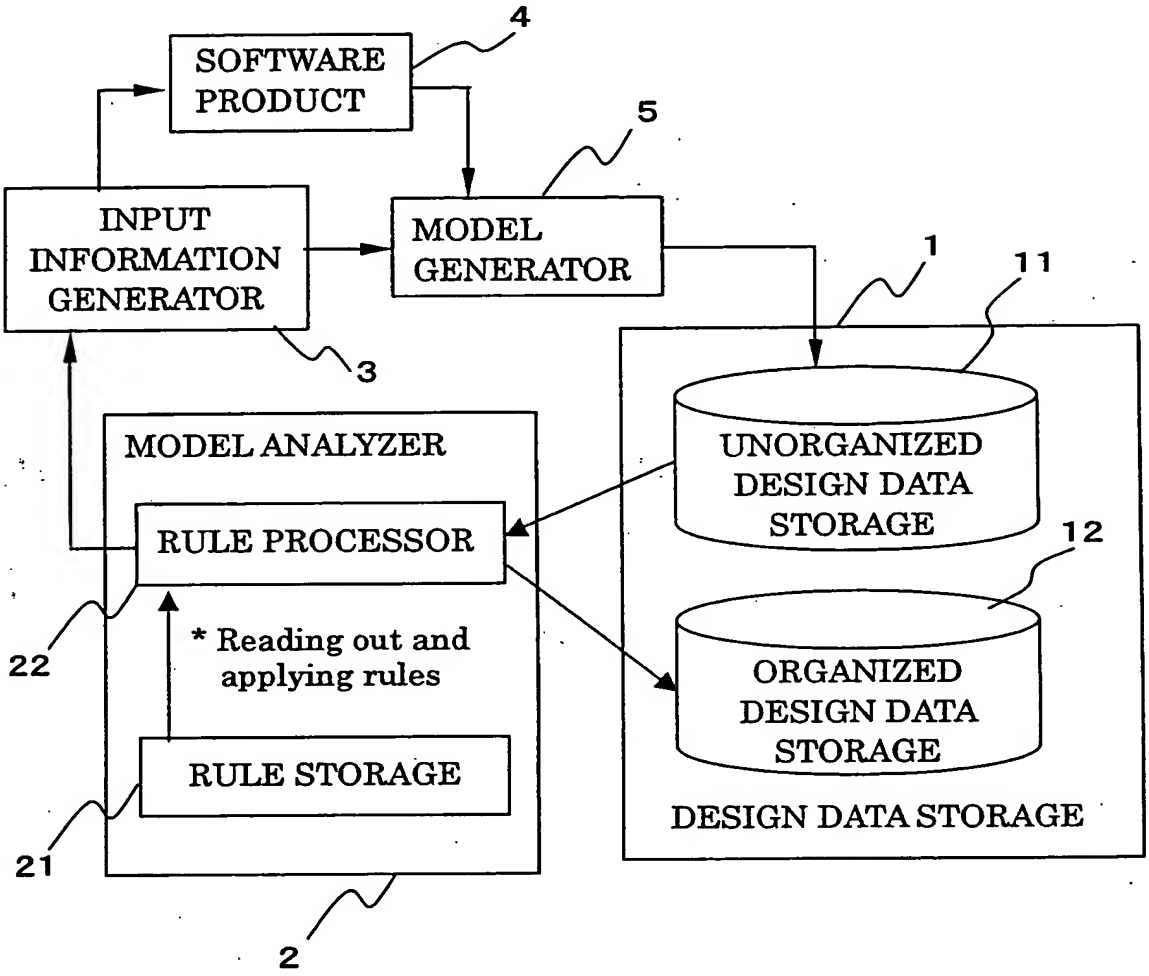

4
SOFTWARE PRODUCT
5
INPUT INFORMATION GENERATOR
MODEL GENERATOR
1
11
3
MODEL ANALYZER
UNORGANIZED DESIGN DATA STORAGE
RULE PROCESSOR
12
22
* Reading out and applying rules
ORGANIZED DESIGN DATA STORAGE
RULE STORAGE
21
DESIGN DATA STORAGE
2

Fig. 6

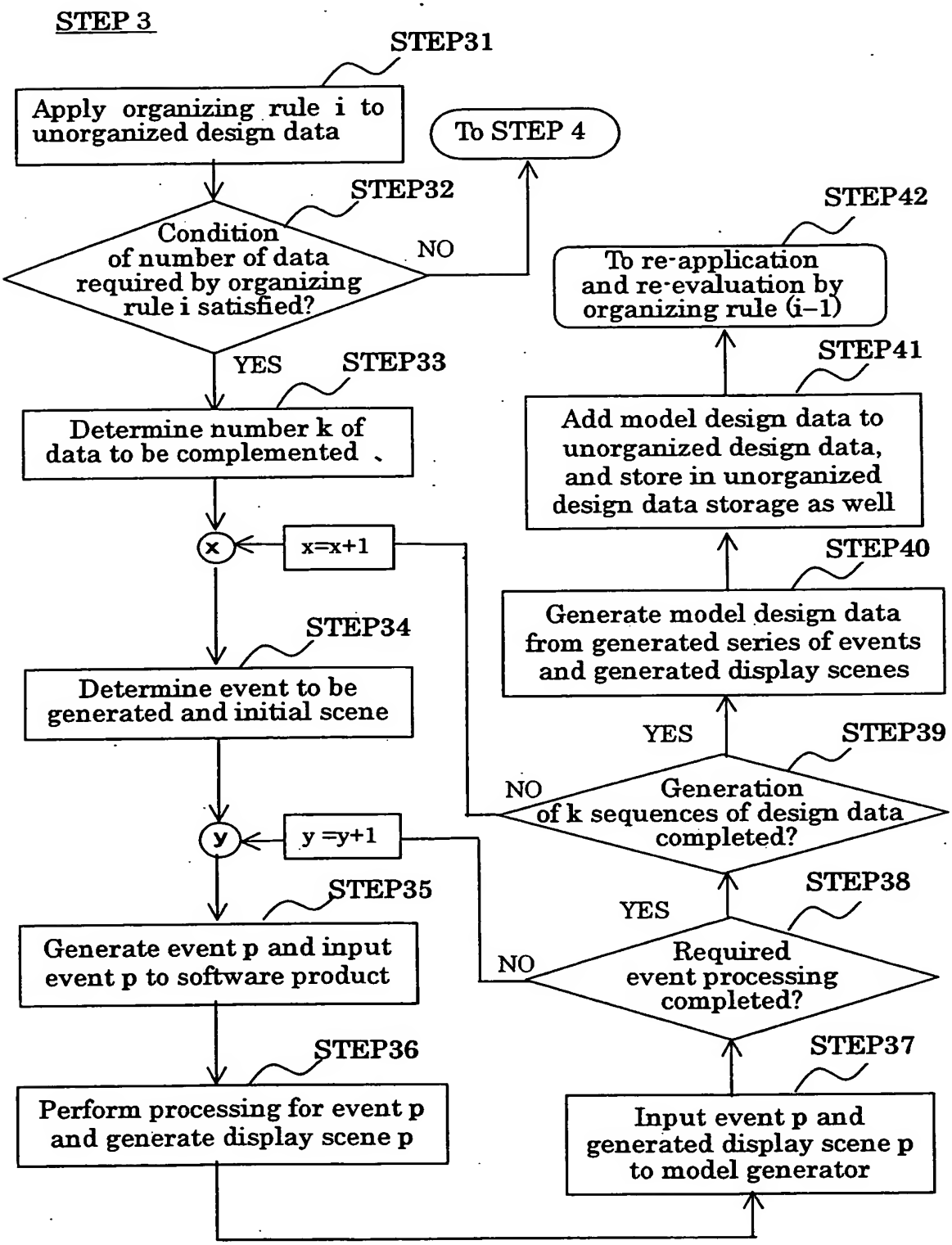
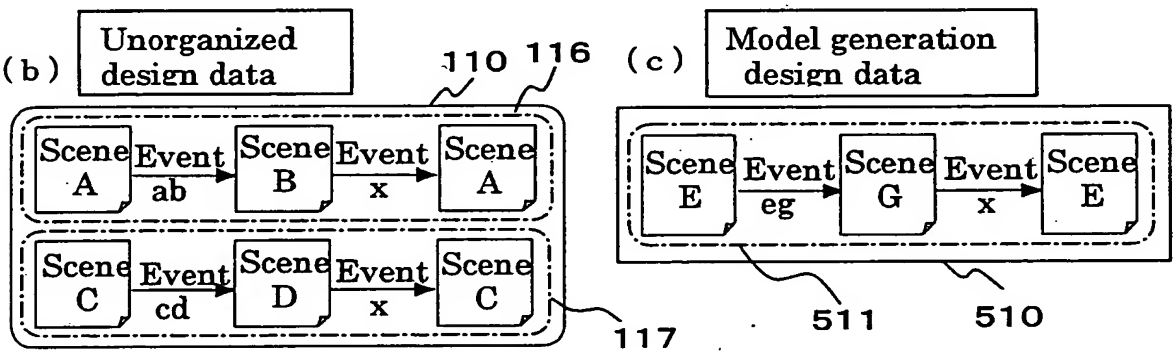

STEP 3
STEP31
Apply organizing rule i to unorganized design data
To STEP 4
STEP32
Condition of number of data required by organizing rule i satisfied?
NO
YES
STEP33
Determine number k of data to be complemented
x
x=x+1
STEP34
Determine event to be generated and initial scene
y
y =y+1
STEP35
Generate event p and input event p to software product
STEP36
Perform processing for event p and generate display scene p
STEP37
Input event p and generated display scene p to model generator
STEP38
Required event processing completed?
NO
YES
STEP39
Generation of k sequences of design data completed?
NO
YES
STEP40
Generate model design data from generated series of events and generated display scenes
STEP41
Add model design data to unorganized design data, and store in unorganized design data storage as well
STEP42
To re-application and re-evaluation by organizing rule (i–1)

Fig. 7

(a) Organizing rules

213

Name	Condition	Condition values	Applied processing
Return Event identification 1	Number of times of transitions to previous scene by event is n or more	n=3	Replace current event with return event, and convert into "return" transition
Return event identification 2	Number of times of transitions to previous scene by event is less than n and not less than m	m=2 n=3	Generate k kinds of manipulation information generating current event for scene selected at random, and re-evaluate "identification 1"



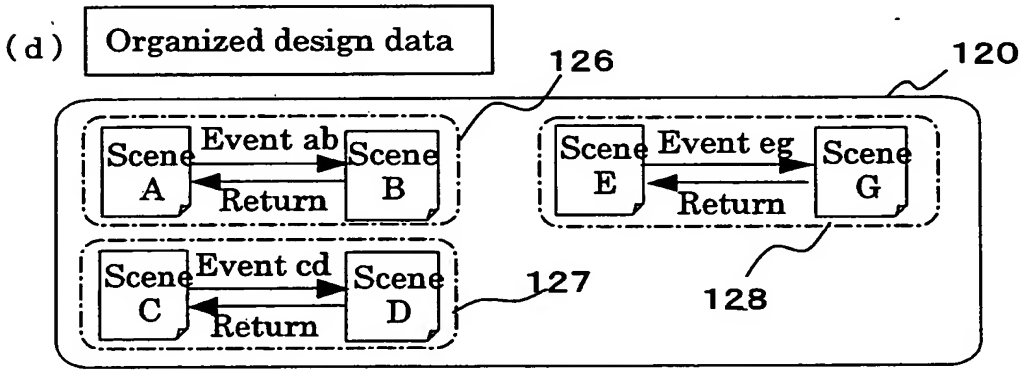


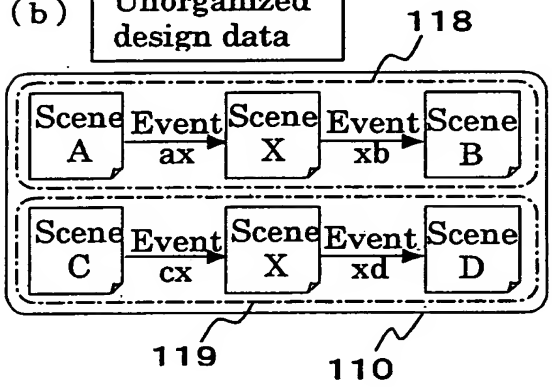
Fig. 8

(a) Organizing rules

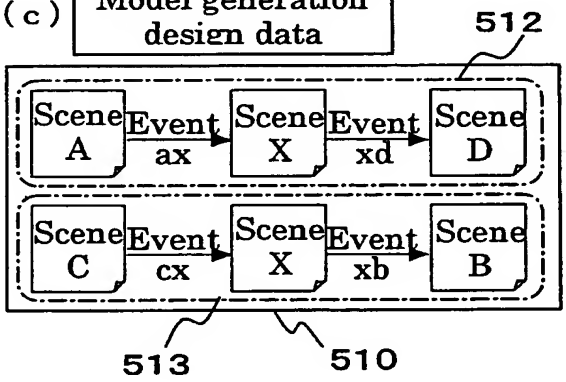
214

Name	Condition	Condition values	Applied processing
Intermediate scene unification 1	When scenes included in n or more scene sequences are identical, and transition destination varies according to event in current scene regardless of scene sequences (histories) up to current scene	n=4	Unify current scenes
Intermediate scene unification 2	When scenes included in less than n and not less than m scene sequences are identical, and for less than n scene sequences transition destination varies according to event in current scene regardless of scene sequences up to current scene	m=2 n=4	Input insufficient conditions to input information generator and re-evaluate "Intermediate scene unification 1"

(b) Unorganized design data



(c) Model generation design data



(d) Organized design data

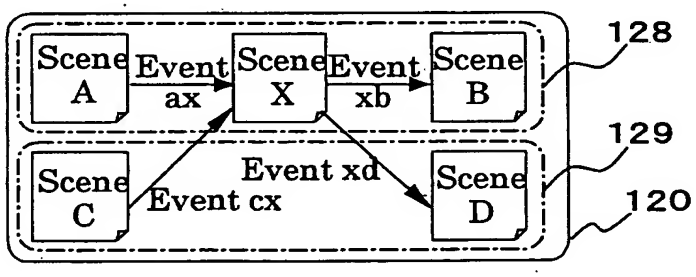


Fig. 9

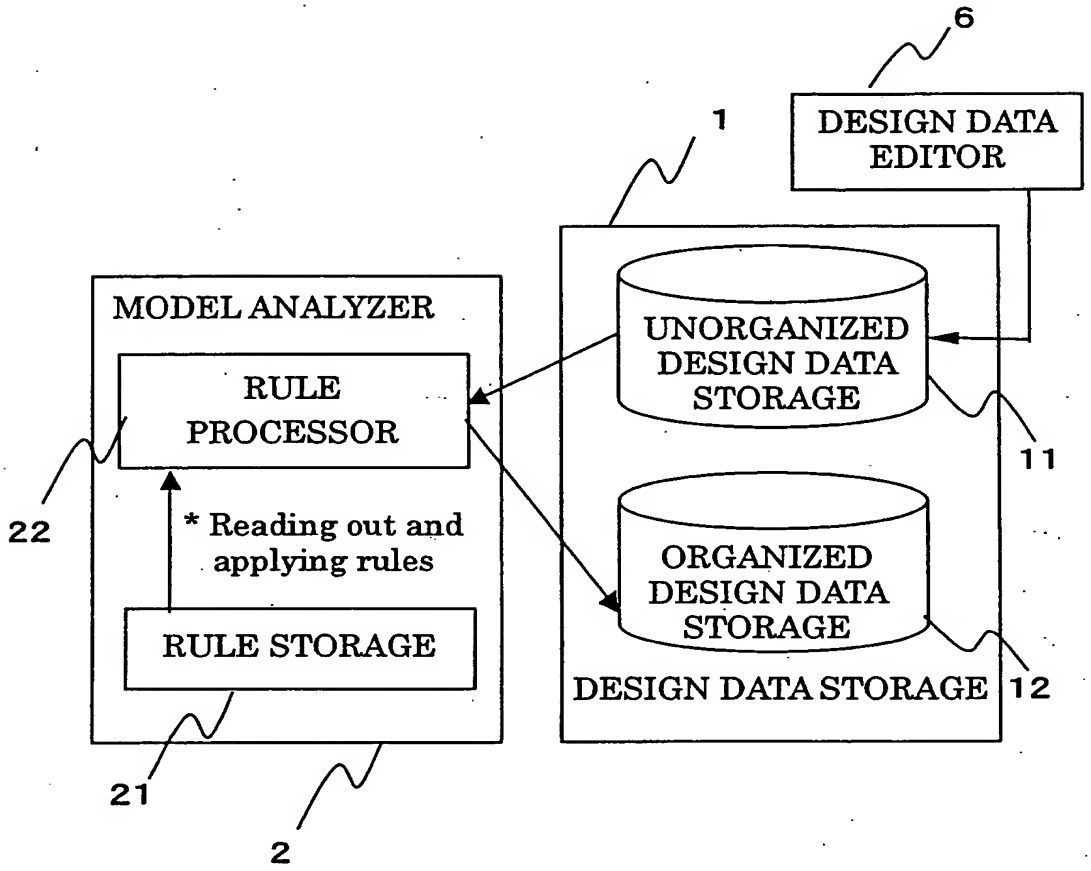

6
DESIGN DATA EDITOR
1
MODEL ANALYZER
RULE PROCESSOR
22
* Reading out and applying rules
RULE STORAGE
21
2
UNORGANIZED DESIGN DATA STORAGE
11
ORGANIZED DESIGN DATA STORAGE
12
DESIGN DATA STORAGE

Fig. 10

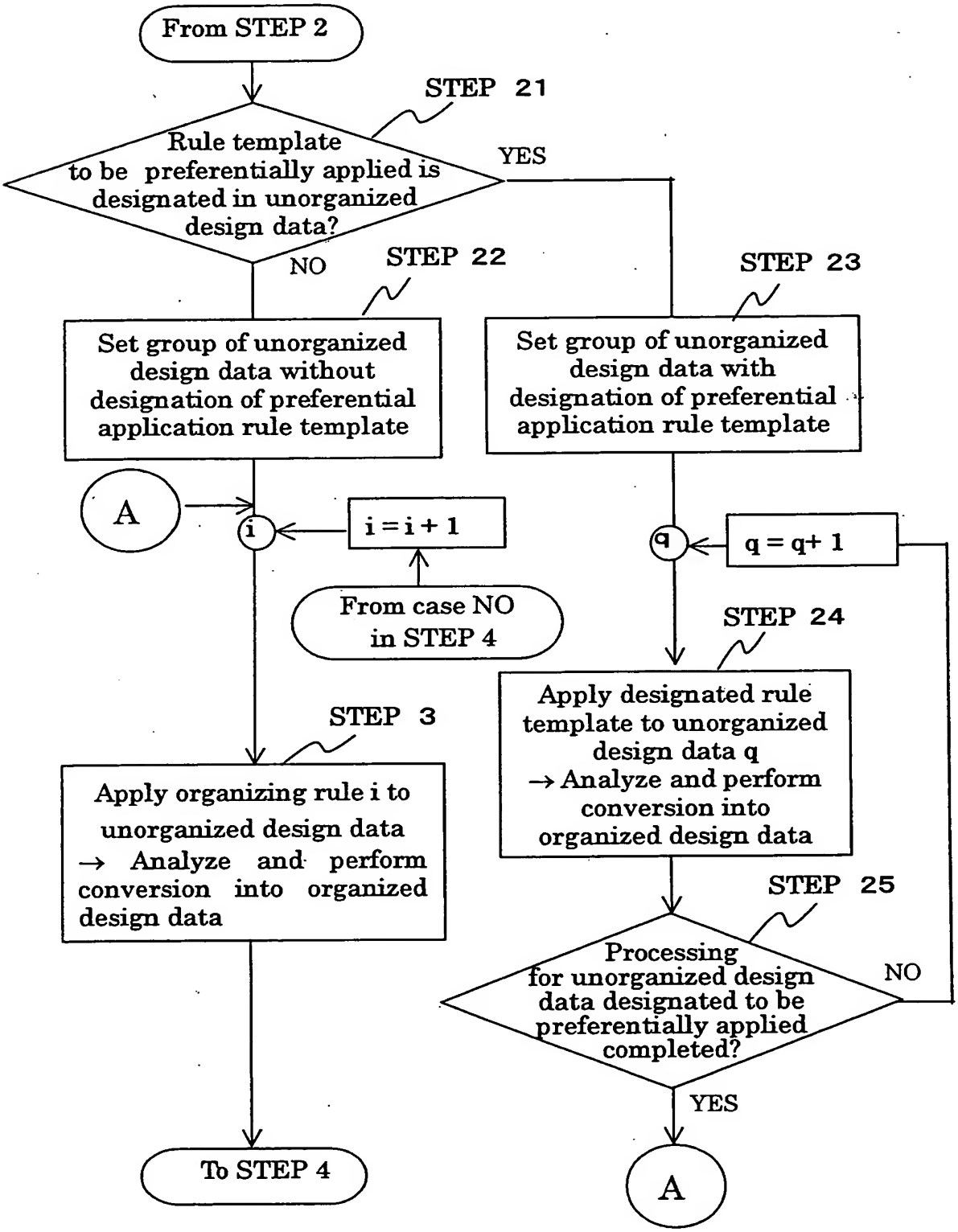

From STEP 2
STEP 21
Rule template to be preferentially applied is designated in unorganized design data?
YES
NO
STEP 22
STEP 23
Set group of unorganized design data without designation of preferential application rule template
Set group of unorganized design data with designation of preferential application rule template
A
i
i = i + 1
From case NO in STEP 4
q
q = q+ 1
STEP 24
Apply designated rule template to unorganized design data q → Analyze and perform conversion into organized design data
STEP 3
Apply organizing rule i to unorganized design data → Analyze and perform conversion into organized design data
STEP 25
Processing for unorganized design data designated to be preferentially applied completed?
NO
YES
To STEP 4
A

Fig. 11

(a) Menu template

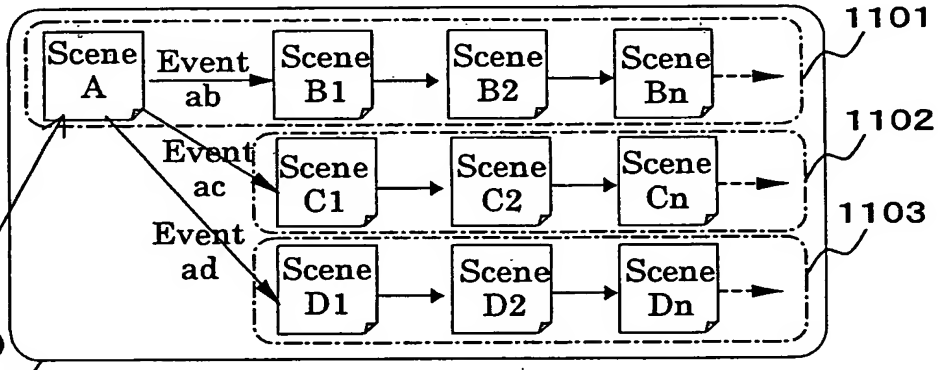
215

Name	Condition	Condition values	Applied processing
Separation of branch destinations	When n or more branches are present	n=3	Deem as menu and layer branch destinations

(b)

Unorganized design data

* Designate by user input =Designate template (menu template)



110

(c) Organized design data

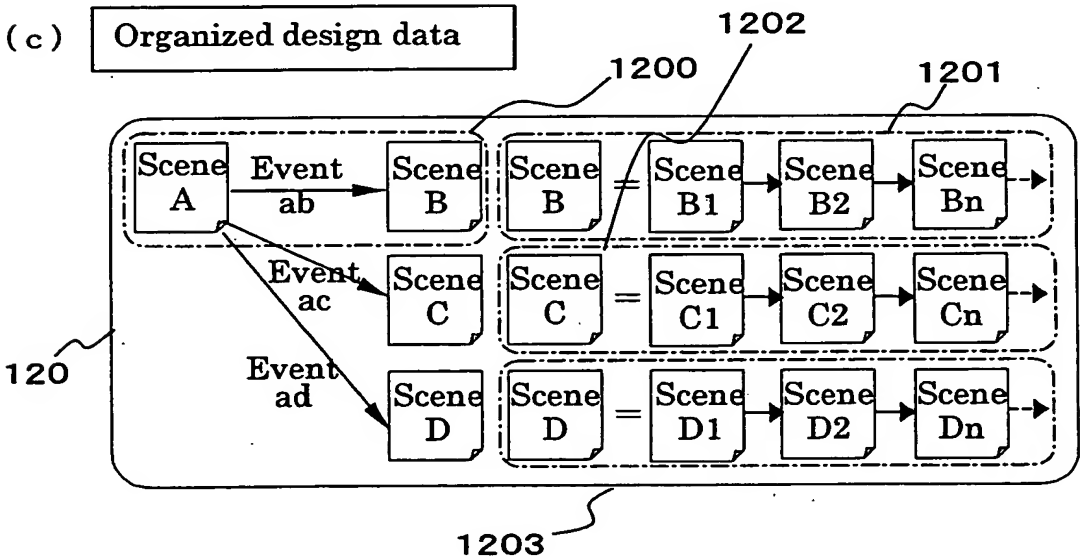


Fig. 12

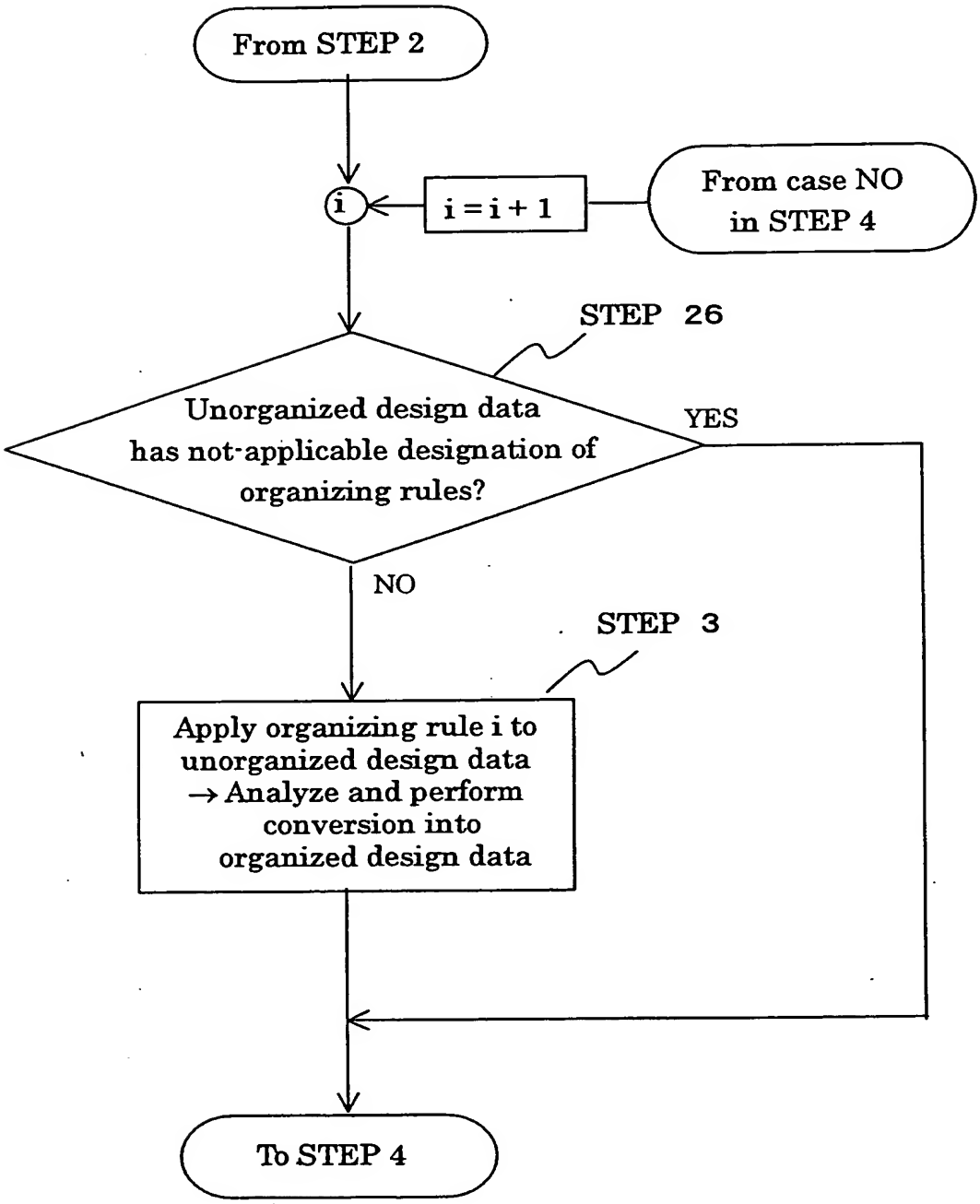

From STEP 2
i
i = i + 1
From case NO in STEP 4
STEP 26
Unorganized design data has not-applicable designation of organizing rules?
YES
NO
STEP 3
Apply organizing rule i to unorganized design data → Analyze and perform conversion into organized design data
To STEP 4

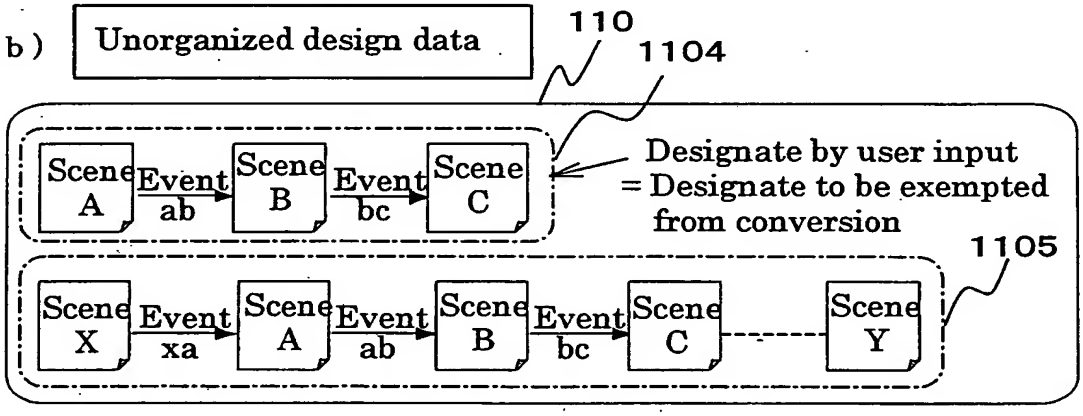
Fig. 13

(a) Organizing rule

216

Name	Condition	Condition values	Applied processing
Elimination of duplication	When including entire existing scene sequence		Replace by calling existing scene sequence
* * *			

(b) Unorganized design data



(c) Organized design data

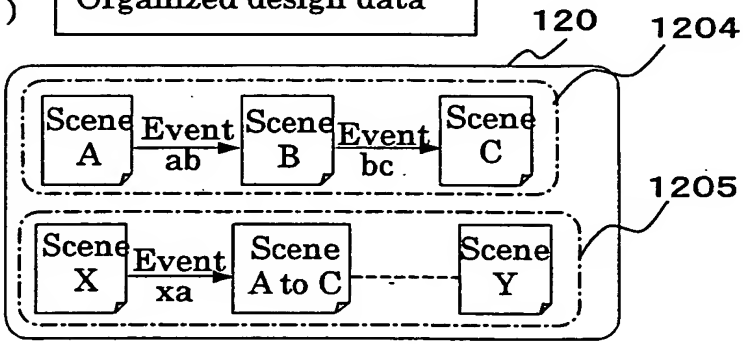
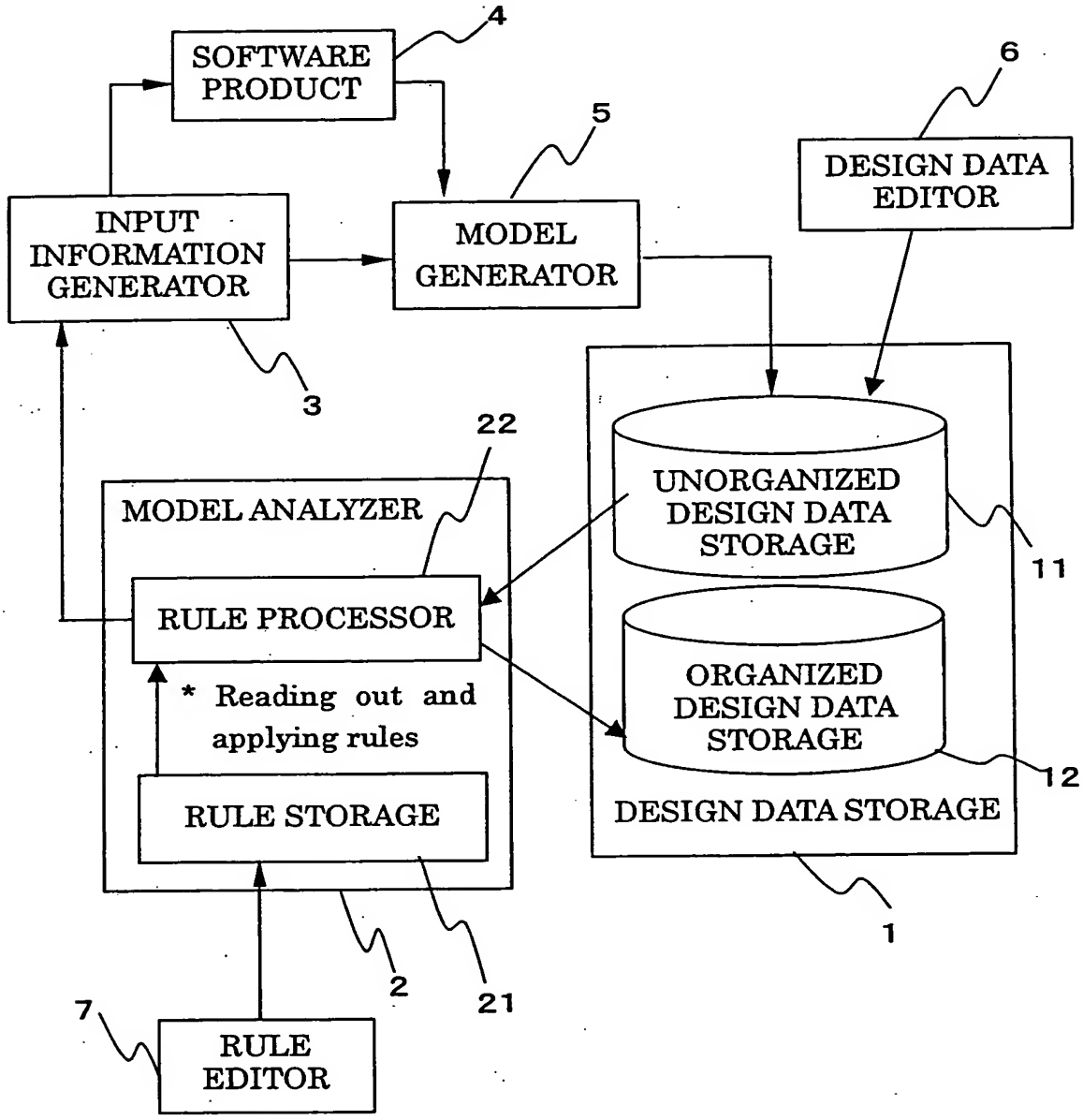


Fig. 14


SOFTWARE PRODUCT
4
6
5
DESIGN DATA EDITOR
INPUT INFORMATION GENERATOR
MODEL GENERATOR
3
22
MODEL ANALYZER
UNORGANIZED DESIGN DATA STORAGE
11
RULE PROCESSOR
* Reading out and applying rules
ORGANIZED DESIGN DATA STORAGE
12
RULE STORAGE
DESIGN DATA STORAGE
1
2
21
7
RULE EDITOR